

COMPARISON OF THE EFFECTS OF TAMSULOSIN AND SOLIFENACIN IN AIDING STONE EXPULSION AFTER EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY FOR THE LOWER URETERAL STONES

Hypothesis / aims of study

To analyze and compare the effects of tamsulosin and solifenacin on stone expulsion and pain relieving after extracorporeal shockwave lithotripsy for the lower ureteral stones.

Study design, materials and methods

Totally 120 patients with lower ureteral stones of 0.5-1.1cm in diameter were randomized into 4 groups with 30 patients in each group. The control group did not receive any antispasmodic therapy besides lithotripsy; solifenacin group received 5mg solifenacin, once daily; tamsulosin group received 0.2mg tamsulosin, once daily; tamsulosin and solifenacin combination group received 5mg solifenacin, once daily + 0.2mg tamsulosin, once daily. The observational period for each patient during treatment did not exceed 2 weeks.

Results

The number of patients with successful stone expulsion within 2 weeks was 24 (80.0%) in control group, 26 (83.3%) in solifenacin group, 28 (93.3%) in tamsulosin group, and 29 (96.7%) in drug combination group. The difference had statistical significance between tamsulosin group or drug combination group and control group, and between drug combination group and solifenacin or tamsulosin group. The mean stone expulsion time in each group was (7.6±3.7)d, (6.3±2.5)d, (4.4±2.3)d and (3.5±2.2)d, respectively; the time was shorter in drug combination group than in control group with difference of statistical significance; the difference between tamsulosin group and control group had statistical significance; the time was shorter in drug combination group than in other groups with difference of statistical significance. The differences in analgesic usage and relief of the irritation symptoms of bladder had statistical significance between solifenacin group or drug combination group and control group.

Interpretation of results

After extracorporeal shockwave lithotripsy for the lower ureteral stones, both tamsulosin and solifenacin are safe and effective in aiding stone expulsion, shortening the stone expulsion time, relieving pain, and improving the symptoms, although tamsulosin combined with solifenacin can produce better therapeutic effects.

Concluding message

ureteral stones; tamsulosin; solifenacin

References

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Disclosures

Funding: No **Clinical Trial:** Yes **Public Registry:** No **RCT:** Yes **Subjects:** HUMAN **Ethics not Req'd:** It is investigator driven study and there is not treatment before for these kinds of patients **Helsinki:** Yes **Informed Consent:** Yes